circuit are within expected operating parameters over a plurality of clock cycles. The voltage is adjusted based on the determination.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of one embodiment of a system to provide adaptive voltage control.

FIG. 2 is an example of another system that can be utilized to provide adaptive voltage control.

FIG. 3 depicts still another example system to provide adaptive voltage control.

FIG. 4 depicts an example of a power supply control system that can be implemented.

FIG. 5 is flow diagram depicting a methodology for adapting voltage.

FIG. 6 is a flow diagram depicting a methodology for implementing an adaptive supply voltage.

11-8-2006 JM

FIG. 7 is a flow diagram depicting another methodology for adjusting a supply voltage.

DETAILED DESCRIPTION

This disclosure relates generally to an approach that can be utilized to provide adaptive voltage control (*e.g.*, for an IC chip). The voltage can be adapted, for example, based on detecting one or more symptoms indicative of wasted power, such as can be referred to as a "throttle event", or lack thereof. For example, a throttle event corresponds to a modification in operating frequency (*e.g.*, a reduction or increase), such as implemented to facilitate operation of IC components in response to a corresponding modification in the voltage. The approach described herein may enable a designer and user to control the number of throttle events at a level that provides a desired balance between operating frequency and operating voltage, thus mitigating wasted power.

FIG. 1 depicts a system 10 that adjusts a supply voltage. The system 10 can be implemented on an IC 12, such as a VLSI chip (*e.g.*, a microprocessor, an application specific integrated circuit (ASIC)) or the like. The system 10 in one embodiment enables the IC 12 to achieve a desired relationship between operating voltage and operating frequency, which may be used to improve overall power